

(2) Provide a systematic identification of both natural and man-made hazards associated with the facility;

(3) Evaluate normal, abnormal, and accident conditions, including consideration of natural and man-made external events, identification of energy sources or processes that might contribute to the generation or uncontrolled release of radioactive and other hazardous materials, and consideration of the need for analysis of accidents which may be beyond the design basis of the facility;

(4) Derive the hazard controls necessary to ensure adequate protection of workers, the public, and the environment, demonstrate the adequacy of these controls to eliminate, limit, or mitigate identified hazards, and define the process for maintaining the hazard controls current at all times and controlling their use;

(5) Define the characteristics of the safety management programs necessary to ensure the safe operation of the facility, including (where applicable) quality assurance, procedures, maintenance, personnel training, conduct of operations, emergency preparedness, fire protection, waste management, and radiation protection; and

(6) With respect to a nonreactor nuclear facility with fissionable material in a form and amount sufficient to pose a potential for criticality, define a criticality safety program that:

(i) Ensures that operations with fissionable material remain subcritical under all normal and credible abnormal conditions,

(ii) Identifies applicable nuclear criticality safety standards, and

(iii) Describes how the program meets applicable nuclear criticality safety standards.

§ 830.205 Technical safety requirements.

(a) A contractor responsible for a hazard category 1, 2, or 3 DOE nuclear facility must:

(1) Develop technical safety requirements that are derived from the documented safety analysis;

(2) Prior to use, obtain DOE approval of technical safety requirements and any change to technical safety requirements; and

(3) Notify DOE of any violation of a technical safety requirement.

(b) A contractor may take emergency actions that depart from an approved technical safety requirement when no actions consistent with the technical safety requirement are immediately apparent, and when these actions are needed to protect workers, the public or the environment from imminent and significant harm. Such actions must be approved by a certified operator for a reactor or by a person in authority as designated in the technical safety requirements for nonreactor nuclear facilities. The contractor must report the emergency actions to DOE as soon as practicable.

(c) A contractor for an environmental restoration activity may follow the provisions of 29 CFR 1910.120 or 1926.65 to develop the appropriate hazard controls (rather than the provisions for technical safety requirements in paragraph (a) of this section), provided the activity involves either:

(1) Work not done within a permanent structure, or

(2) The decommissioning of a facility with only low-level residual fixed radioactivity.

§ 830.206 Preliminary documented safety analysis.

If construction begins after December 11, 2000, the contractor responsible for a hazard category 1, 2, or 3 new DOE nuclear facility or a major modification to a hazard category 1, 2, or 3 DOE nuclear facility must:

(a) Prepare a preliminary documented safety analysis for the facility, and

(b) Obtain DOE approval of:

(1) The nuclear safety design criteria to be used in preparing the preliminary documented safety analysis unless the contractor uses the design criteria in DOE Order 420.1, Facility Safety; and

(2) The preliminary documented safety analysis before the contractor can procure materials or components or begin construction; provided that DOE may authorize the contractor to perform limited procurement and construction activities without approval of a preliminary documented safety analysis if DOE determines that the activities are not detrimental to public

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health and safety and are in the best interests of DOE.

§ 830.207 DOE approval of safety basis.

(a) By April 10, 2003, a contractor responsible for a hazard category 1, 2, or 3 existing DOE nuclear facility must submit for DOE approval a safety basis that meets the requirements of this Subpart.

(b) Pending issuance of a safety evaluation report in which DOE approves a safety basis for a hazard category 1, 2, or 3 existing DOE nuclear facility, the contractor responsible for the facility must continue to perform work in accordance with the safety basis for the facility in effect on October 10, 2000, or as approved by DOE at a later date, and maintain the existing safety basis consistent with the requirements of this Subpart.

(c) If the safety basis for a hazard category 1, 2, or 3 existing DOE nuclear facility already meets the requirements of this Subpart and reflects the current work and hazards associated with the facility, the contractor responsible for the facility must, by April 9, 2001, notify DOE, document the adequacy of the existing safety basis and request DOE to issue a safety evaluation report that approves the existing safety basis. If DOE does not issue a safety evaluation report by October 10, 2001, the contractor must submit a safety basis pursuant to paragraph (a) of this section.

(d) With respect to a hazard category 1, 2, or 3 new DOE nuclear facility or a major modification to a hazard category 1, 2, or 3 DOE nuclear facility, a contractor may not begin operation of the facility or modification prior to the issuance of a safety evaluation report in which DOE approves the safety basis for the facility or modification.

APPENDIX A TO SUBPART B OF PART 830—GENERAL STATEMENT OF SAFETY BASIS POLICY

A. INTRODUCTION

This appendix describes DOE's expectations for the safety basis requirements of 10

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CFR Part 830, acceptable methods for implementing these requirements, and criteria DOE will use to evaluate compliance with these requirements. This Appendix does not create any new requirements and should be used consistently with DOE Policy 450.2A, "Identifying, Implementing and Complying with Environment, Safety and Health Requirements" (May 15, 1996).

B. PURPOSE

1. The safety basis requirements of Part 830 require the contractor responsible for a DOE nuclear facility to analyze the facility, the work to be performed, and the associated hazards and to identify the conditions, safe boundaries, and hazard controls necessary to protect workers, the public and the environment from adverse consequences. These analyses and hazard controls constitute the safety basis upon which the contractor and DOE rely to conclude that the facility can be operated safely. Performing work consistent with the safety basis provides reasonable assurance of adequate protection of workers, the public, and the environment.

2. The safety basis requirements are intended to further the objective of making safety an integral part of how work is performed throughout the DOE complex. Developing a thorough understanding of a nuclear facility, the work to be performed, the associated hazards and the needed hazard controls is essential to integrating safety into management and work at all levels. Performing work in accordance with the safety basis for a nuclear facility is the realization of that objective.

C. SCOPE

1. A contractor must establish and maintain a safety basis for a hazard category 1, 2, or 3 DOE nuclear facility because these facilities have the potential for significant radiological consequences. DOE-STD-1027-92 ("Hazard Categorization and Accident Analysis Techniques for compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports," Change Notice 1, September 1997) sets forth the methodology for categorizing a DOE nuclear facility (see Table 1). The hazard categorization must be based on an inventory of all radioactive materials within a nuclear facility.

2. Unlike the quality assurance requirements of Part 830 that apply to all DOE nuclear facilities (including radiological facilities), the safety basis requirements only apply to hazard category 1, 2, and 3 nuclear facilities and do not apply to nuclear facilities below hazard category 3.